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BRADFORD

Original Bradford Soap Works, Inc.

13 September 1989

Lynne A. Fratus
U.S. Environmental Protection Agency
P.O. Box 738
Centerville, Virginia 22020

Dear Ms Fratus:

In reply to your recent letter requesting two missing documents, we wish to submit photocopies of the two letters to R.I. Department of Environmental Management dated October 21 and November 4, 1980 as referenced in the copy of their reply which we originally submitted.

I have taken the liberty of updating both letters by adding current 1989 information to indicate what actually has been taking place. We hope this will now present a complete and honest description of our operations.

Sincerely,

William S. Barnes
William S. Barnes

Laboratory

Enclosures

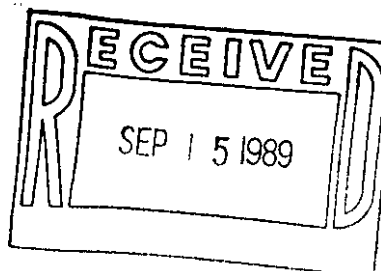
Superfund Records Center

SITE: LA RR

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BRADFORD CROCKFORD
SOAP WORKS, INC.



SEMS DocID

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BRADFORD

Original Bradford Soap Works, Inc.

Special Chemical Products

WEST WARWICK, R. I. 02893 • 401 521-2141

October 21, 1980

Mr. Stephen Majkut
Department of Environmental Management
204 Cannon Building
75 Davis Street
Providence, RI 02903

Dear Mr. Majkut:

We have been requested by our trash removal service to contact you concerning the possibility of obtaining a letter for permission to dump what we believe to be a non-hazardous waste. The material is an aluminum soap. A brief description of its origin might help in understanding the material.

In the soap making process, a watery material settles to the bottom of the kettle, referred to as "spent lye". This consists of water, glycerine, salt, sodium hydroxide and traces of soap. In order to process this liquid in our glycerine recovery plant, it is necessary to remove the soap. This is accomplished by adding aluminum sulfate (alum) and hydrochloric acid to precipitate the soap. After neutralizing, the batch is filtered through a filter press to remove the aluminum soap. The fat sources for the soap is about 90% tallow and 10% coconut oil. The resultant filter cake (containing no filter aids or additives) is an almost dry aluminum soap filter cake.

SEE
NOV. 4
LETTER
FOR
CORRECTION
WSB

We would appreciate your reply regarding this material.

1989
STILL FILTERED
AFTER NEUTRALIZING
To pH 6.5-6.8

Sincerely,

1989 UPDATE

THE ALUMINUM SULFATE IS ADDED ORIGINAL BRADFORD SOAP WORKS, INC. AS A SOLUTION. THE REASON THE FILTER CAKE IS ALMOST DRY IS BECAUSE THE FILTER CAKE, WHILE IN THE FILTER PRESS, IS BLOWN WITH COMPRESSED William S. Barnes Laboratory AIR FOR AN EXTENDED PERIOD TO MAKE REMOVAL EASIER AND MORE COMPLETE. THUS, ANY EXCESS ALUMINUM SULFATE SOLUTION IS BLOWN THRU THE CAKE ALONG WITH THE MOISTURE

November 4, 1980

Mr. Stephen^A Hajkut
Department of Environmental Management
204 Cannon Building
75 Davis Street
Providence, RI 02903

Dear Mr. Hajkut:

This letter is in reply to your request for further information regarding the ph of filter cake from our glycerine recovery operation. (My letter of October 21, 1980).

First, let me correct one statement in my original letter describing the process which is in error. I had described how the watery material ("spent lye") from the bottom of the soap kettle is treated with aluminum sulfate and hydrochloric acid to precipitate the soap. I stated the batch is filtered after neutralizing, whereas it is actually filtered on the acid side before neutralizing. 1989 UPDATE → FILTERED AFTER NEUTRALIZING TO PH 6.5-6. WJ

Since there is no standard method (at least not known to us) for determining ph of a basically insoluble material, we prepared a 1% dispersion of the material by mixing and "grinding" (with a stirring rod) a small amount of the almost dry cake with distilled water, then diluting to volume. A check of at least four separate batches yielded a result of ph 5, plus or minus a tenth or two.

Although this is representative of what we have been producing, our inquiry into the subject has spurred our production people to institute controls to limit any excesses of hydrochloric acid or aluminum sulfate beyond that which is necessary for the process. Not only was this prompted by economic consideration but in attempting to titrate acidity, it was discovered that aluminum sulfate itself has a ph of 3.2 in 1% solution, and since

1989 UPDATE ph OF RESULTING FILTER CAKE IS
NOW NEUTRAL (ph 6-7)

WJB

it reacts upon titration with alkali, it complicates the determination of the hydrochloric acid itself. Thus, we are hopefully looking forward to raising the ph of the filter cake above the reported figure.

Sincerely,

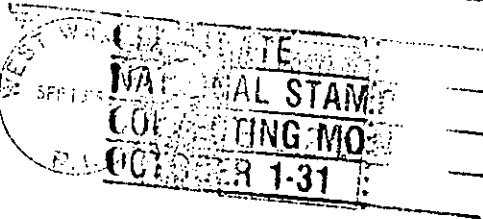
ORIGINAL BRADFORD SOAP WORKS, INC.

William S. Barnes
Laboratory

WSB/dnt

BRADFORD

Original Bradford Soap Works, Inc.
CS 1007, West Warwick, RI 02893



Lynne A. Fratus
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